Book Review: Rewiring Education: How Technology Can Unlock Every Student's Potential Author: John Couch and Jason Towne
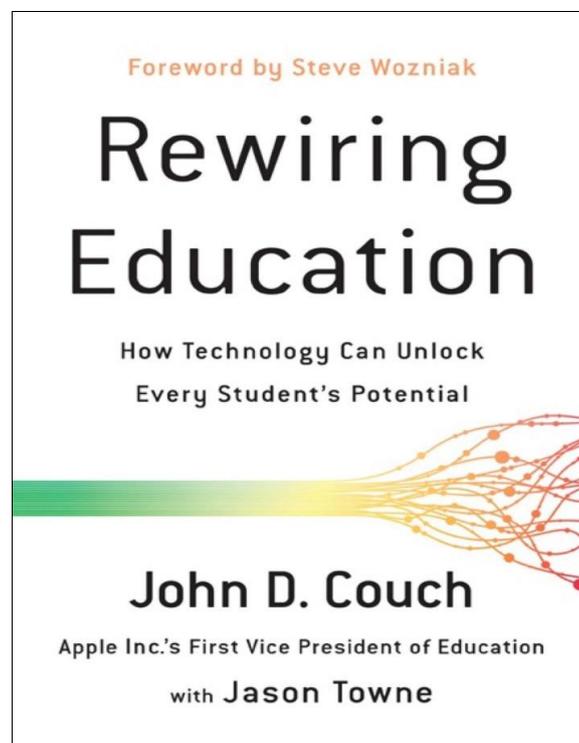
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This book points out that how currently technological innovation can revolutionize learning and teaching to unlock a student's potential. There are an introduction and 15 chapters in this book. The authors name each chapter as a one keyword involved with the main ideas or argument of chapter and subchapter as a short phrase also. These are easy to understand. The reviewer divides this book's content as three main sections of this book. First, the authors would like to make sure that a reader understands what keys success of pedagogy in psychological term is, details in chapter 1-7. Second, how to utilize technology, details in chapter 8-13. Finally, the remaining provides which technologies have the most potential to drive the education system currently and beyond. Each chapter introduces or shares an educational research, a result of research-and-development's collaboration between schools and technology companies, and a case study to illustrate what coming up the authors' idea or argument is next in the chapter.

In the introduction and chapter 1, "**Rewiring**", the book presents the issues of the current educational system in the US especially in elementary and secondary schools. Even though, the common methods "repairing" and "replacing" are used to improve the education system, efforts have not been successful. The authors offer "rewiring" that means upgrading educational operating system or "**rewiring education**" to transform passive traditional educations to active models of learning which better connect students, teachers, parents, and society together.

In the chapter 2, "**Design**", the book mentions that the people in our educational system must believe every child has potential to learn and succeed and must help them together with the proper use of technology.

In the chapter 3, "**Potential**", the authors focus on student's potential and mention that do not use cognitive bias and confirmation bias to label student as an underachiever. These biases limit student's potential based on our possible assumption. Recognizing these biases is the heart of rewiring education. The authors also state that even though nature and nurture are responsible for our intelligence and abilities, correctly using technology can be educational equalizers.

In the chapter 4, "**Motivation**", the authors present what motivation is, and what self-determination is. These helps a reader better understand how to motivate a student for learning. Motivation is a prerequisite for effective of learning. The authors divide self-determination as intrinsic motivation that is something good in long term within and extrinsic motivation that depends on external factors and better for short term. However, the authors mention that technology has the power to use both types. At the end, the authors also mention "helping kids discover their own passions and interests, encouraging and nurturing an intrinsic motivation and self-determination, and believing that they can be as successful will lead to more self-confidence, grit, initiative, and ultimately better learning".

In the chapter 5, "**Learning**", the authors state that what the different between education and learning is and define Learning should be formed "retrieving", "memorizing" and then "understanding" facts. Furthermore, the authors convince that personalized learning; teaching and learning for students as individuals not isolation, is the backbone of successful teaching and learning.

In the chapter 6, "**Space**", the authors present form of learning spaces or environments which is the most effective for the learner.

In the chapter 7, "**Challenges**", the book describes about the first Apple's educational research project "Apple Classrooms of Tomorrows" or ACOT that focuses on using technology in education and looking for the best learning model. The result is a new tech-supported pedagogy called "Challenge-Based Learning (CBL)".

In the chapter 8, "**CBL**", the authors give us more details of CBL framework which is unsimilar PBL (Project-Based Learning). The PBL projects are assigned to students while CBL is created or designed by their own. There are three phases of CBL framework: to decide the problem, to break the problem down, and to do action plan. The authors also shortly describe it as follows: Feel, Imagine, Do, and Share. Moreover, the authors emphasize technologies can offer answers to complete CBL.

In the chapter 9, "**Access**", the authors propose that we need a new set of principles called "21st Century ABCs of Learning": **Access**, **Build**, and **Code,** to rewire education and mentions that "it doesn't matter how good a technology is if those whom it's intended don't have **access**". The authors also dive into the online learning such as Massive Open Online Courses (MOOCs) and Khan Academy and Apple Camp.

In the chapter 10, "**Build**", the authors describe the core to rewire education is not only one that kids have **access** to key technologies, but also be taught problem solving by using tools and **building** things in order to help them to be a "Maker". The authors state online or interactive games especially MMORPG (Massively Multiplayer Online Role-Playing Game) is an open-world model of learning. In addition, kids as digital natives can make own creativity by coding in the games.

In the chapter 11, "**Code**", the authors point out that critical thinking, problem solving, creativity can be learned in **coding**. Moreover, it gives kids a significant boost in self-confidence.

In the chapter 12, "**Teaching**", the authors describe that technology has changed through Artificial Intelligence (AI), adaptive learning software, virtual and augmented reality. It is now possible for us to begin designing and implementing to support personalized learning environment. Furthermore, "the role of teachers changes from to being a conveyer to a facilitator- asking opened questions, guiding to open-ended activities, offering feedback".

In the chapter 13, "**Technology**", the authors share case studies, or classroom models which integrating technology and finally conclude that no matter what model you use as a starting point to integrate technology in your classroom, just make sure that using it to its full potential.

In the chapter 14, "**Transformative**", the book provides which transformative technologies have the most potential to rewire education such as AI for adaptive learning that built-in gamification devices, intelligent assistants such as Apple's Siri, Amazon's Alexa, most common methods for finding answers, IoT (Internet of Things), mobile technology, 3D printing, and interactive books: eBook and Apple iBook.

In the chapter 15, "**Futuristic**", the authors quite believe that Augmented Reality (AR) will play a significant role in the future such as ARKit, Apple's AR technology.

Now the world is driven exponentially by modern technology and innovation. Therefore, the reviewer really agrees with the authors' suggestions to unlock hidden potential of kids who as digital natives by technology. However, their schools or families should support the kids to collaborate with mentioned transformative technologies to meet the successful teaching and learning. Besides, from technical point of view, we must closely advise or take care of kids to beware of cyber security threats while access into online technology. Certainly, as the reviewer, I encourage this book for especially parents, teachers, educational leaders, and who may be interested in future education.

REFERENCE

Couch, J., & Towne, J. (2018). **Rewiring Education: How Technology Can Unlock Every Student's Potential**. BenBella Books, Dallas, TX., US.